IN THE CLAIMS

This listing of claims will replace all prior versions, and listing, of claims in the application.

Listing of Claims:

1.   (Currently Amended)   A method ~~for~~ of specifying a ~~system~~ behavior of a system, comprising:

> (i) ~~providing a system Graphic User Interface (GUI) at least part of which representing real world Graphic User Interface of the system; the system GUI includes objects; the system GUI is associated with data structure describing at least the GUI objects; the method includes performing steps that include the following steps (ii) and (iii), as many times as required.~~

> ~~(ii)~~ (i)   playing-in a scenario ~~utilizing~~ by operating at least one object of a Graphic User Interface (GUI) of the system ~~GUI, the~~ whose ~~scenario~~ behavior is being specified ~~representative of at least one use case~~; and then specifying a system reaction in response ~~of the utilization of the at least one of said objects~~ to said operating; and

> ~~(iii)~~ (ii)   automatically constructing a formal system behavior specification that corresponds to the scenario, based at least partly on said playing in.

2.   (Cancelled)

3.   (Currently Amended) The method according to Claim ~~2~~ 1, wherein said step ~~(ii)~~ (i) further includes:

> a)   specifying user action by operating at least one of said objects;

> b)   specifying environment action by operating at least one of said objects; and

> c)   specifying system reaction by operating at least one of said objects.

4.   (Currently Amended) The method according to Claim ~~2~~ 1, wherein said objects include at least one internal object and wherein said step ~~(ii)~~ (i) further includes operating at least one internal object.

Appln. No. 10/034,433
Reply to Office Action of 07/26/2005

Attorney Docket No. **72829**

5.   (**Currently Amended**)   The method according to Claim 3 1, wherein said objects include at least one internal object and wherein said step (ii) (i) further includes operating at least one internal object.

6.   (**Currently Amended**)   The method according to Claim 2 1, further comprising the step of: defining at least one control construct and wherein said step (iii) (ii) includes constructing formal system behavior specification that corresponds to the control construct.

7.   (**Original**)   The method according to Claim 6, wherein said control construct step includes creating generalization and loops selected from the group that includes dynamic loops, unbound loops and fixed loops.

8.   (**Currently Amended**)   The method according to Claim 1, wherein said step (iii) (ii) includes constructing symbolic messages.

9.   (**Original**)   The method according to Claim 1, further comprising the step of: reflecting in the system GUI the result of the played-in scenario.

10.   (**Previously Presented**)   The method according to Claim 1, wherein said formal system behavior specification being at least one Live sequence chart (LSC).

11.   (**Original**)   The method according to Claim 1, wherein said formal system behavior specification being Temporal logic language.

12.   (**Original**)   The method according to Claim 1, wherein said formal system behavior specification being at least one Symbolic timing diagram.

13.   (**Original**)   The method according to Claim 1, wherein said formal system behavior specification being at least one Timed Buchi Automata.

14.   **(Currently Amended)** The method according to Claim 1, further comprising ~~performing the following step as many times as required~~:

(iv) (iii)   playing-out ~~a~~ said scenario ~~utilizing the system~~ by operating said at least one object of said GUI ~~and the system behavior specification and specifying in the system GUI at least part of the result of operation of said played-out scenario~~ , wherein in response to said playing out, at least one object of said GUI reflects a reaction of said system in accordance with said constructed formal system specification.

15.   **(Currently Amended)** The method according to Claim ~~2~~ 1, further comprising the step of:

defining at least one condition that may or must hold regarding the system, and wherein said step ~~(iii)~~ (ii) includes constructing formal system behavior specification that corresponds to said at least one condition.

16.   **(Original)**   The method according to Claim 15, wherein at least one of said conditions includes defining condition regarding one or more of the operated objects.

17.   **(Original)**   The method according to Claim 10, further comprising the step of: selectively modifying at least one of said charts.

18.   **(Cancelled)**

19.   **(Currently Amended)** An apparatus for specifying a ~~system~~ behavior of a system, comprising:

a ~~system~~ Graphic User Interface (GUI) of the system whose behavior is being specified, said GUI including at least one object; ~~at least part of which representing real world Graphic User Interface of the system; the system GUI includes objects and associated with data structure describing at least the GUI objects~~; and

~~the apparatus includes a Play-Engine configured to perform at least the following, as many times as required:~~

i)   ~~playing-in a scenario utilizing at least one object of the system GUI, the~~
~~scenario is representative of at least one use case; and specifying system reaction~~
~~in response to utilization of at least one of said objects; and~~

(ii)   ~~automatically constructing~~ a play engine configured to construct a formal
system behavior specification ~~that corresponds to the scenario~~ <u>corresponding at
least partly to a scenario, said scenario having been played in by operating at least
one object of said GUI and specifying a system reaction to said operating.</u>

20.   **(Currently Amended)**   A method for playing out ~~scenarios~~ <u>a scenario</u> in a
system, comprising:

(i)   ~~providing a system Graphic User Interface (GUI) that includes objects; the~~
~~system GUI is associated with data structure describing at least the GUI~~
~~objects;~~

(ii)   ~~providing a formal system behavior specification;~~
~~performing the following step as many times as required:~~

playing-out a scenario ~~utilizing the system~~ <u>by operating at least one object of a</u>
<u>graphic user interface (GUI)</u> <u>of a</u> ~~and the~~ system <u>whose</u> behavior <u>in said scenario has been at
least partly specified in a formal system behavior</u> specification<u>, and at least one object of said
GUI reflecting a reaction of said system to said operating, said reaction being in accordance
with said formal system behavior specification.</u> ~~and specifying in the system GUI at least part~~
~~of the result of the operation of said played-out scenario.~~

21.   **(Cancelled).**

22.   **(Previously Presented)** The method according to Claim 20,
wherein said formal system behavior specification being at least one Live sequence chart
(LSC).

23.   **(Original)**   The method according to Claim 20, wherein said
formal system behavior specification being Temporal logic language.

Appln. No. 10/034,433
Reply to Office Action of 07/26/2005

Attorney Docket No. **72829**

24.   **(Original)**   The method according to Claim 20, wherein said formal system behavior specification being at least one Symbolic timing diagram.

25.   **(Original)**   The method according to Claim 20, wherein said formal system behavior specification being at least one Timed Buchi Automata.

26.   **(Original)**   The method according to Claim 20, wherein said playing out includes: testing the behavior of the system directly from the system behavior specification.

27.   **(Previously Presented)**   The method according to Claim 26, wherein said testing includes running scenarios and forbidden scenarios.

28.   **(Original)**   The method according to Claim 20, further comprising the step of recording at least one played out scenario, constituting a run.

29.   **(Original)**   The method according to Claim 22, wherein said system behavior specification includes existential charts and universal charts, and wherein said universal charts include user action part and system reaction part.

30.   **(Original)**   The method according to Claim 20, further including the step of: indicating if the system behavior specification or portion thereof is successful or violated.

31.   **(Previously Presented)**   The method according to Claim 20, wherein said system behavior specification includes existential charts and universal charts, and wherein said universal charts include user action part, environment action part and system reaction part, and further including the step of providing a run that includes either or both of user and environment part and system reaction part, constituting a played scenario, and re-playing the run.

32.   **(Original)**   The method according to Claim 20, wherein said system behavior specification includes existential charts and universal charts, and wherein said universal charts include user action part, environment action part and system reaction part, and further comprising the step of, tracing either or both of said existential and universal charts, and indicating if a chart is successful or violated.

33.   **(Original)**   The method according to Claim 31, further comprising the step of providing either or both of the user action part and environment action part of said run, replaying the run and indicating if the existential charts are successful or violated.

34.   **(Original)**   The method according to Claim 22, wherein said LSC charts include at least two live copies of the same chart simultaneously.

35.   **(Original)**   The method according to Claim 20, wherein said objects include at least one internal object and wherein said step further includes operating at least one internal object.

36.   **(Original)**   The method according to Claim 35, wherein said system GUI includes an object map and further comprising the step of: reflecting in the object map the result of the playing-out.

37.   **(Original)**   The method according to Claim 4, wherein said system GUI includes an object map and further comprising the step of: reflecting in the object map the result of the playing-in.

38.   **(Original)**   The method according to Claim 5, wherein said system GUI includes an object map and further comprising the step of: reflecting in the object map the result of the playing-in.

39. **(Currently Amended)** An apparatus for playing out ~~scenarios~~ a scenario in a system, comprising:

Appln. No. 10/034,433
Reply to Office Action of 07/26/2005

Attorney Docket No. **72829**

a ~~system~~ Graphic User Interface <u>(GUI) of the system whose behavior in a scenario</u> <u>has been at least partly specified in a formal system behavior specification, said GUI</u> <u>including at least one object;</u> ~~that includes objects and associated with data structure~~ ~~describing at least the GUI objects~~; <u>and</u>

~~a formal system behavior specification;~~

a play~~-out~~ engine configured to ~~perform~~ <u>play out said scenario by causing</u> at least <u>one object of said GUI to reflect a reaction of said system in accordance with said</u> <u>formal</u> ~~the following as many times as required: playing-out a scenario utilizing the system~~ ~~GUI and the~~ system behavior specification<u>, when at least one object of said GUI is operated</u> <u>on</u> ~~and specifying in the system GUI at least part of the result of operation of said played-out~~ ~~scenario.~~

40.   **(Original)**   The method according to Claim 14, wherein said playing-out is used to construct a prototype.

41.   **(Previously Presented)**   The apparatus according to Claim 39, wherein said playing out is used to construct a prototype.

42.   **(Original)**   The method according to Claim 20, wherein said playing-out is used to construct a prototype.

43.   **(Original)**   The method according to Claim 14, wherein said playing-out is used to construct a tutorial.

44.   **(Original)**   The apparatus according to Claim 39, wherein said playing-out is used to construct a tutorial.

45.   **(Original)**   The method according to Claim 20, wherein said playing-out is used to construct a tutorial.

46.   **(Original)**   The method according to Claim 14, wherein said playing-out is used to construct a final implementation of a system.

47.   **(Original)**   The method according to Claim 20, wherein said playing-out is used to construct a final implementation of a system.

48.   **(Previously Presented)** The apparatus according to Claim 39, wherein said playing-out is used to construct a final implementation of a system.

49.   **(Original)**   A computer program product that includes a storage medium storing a computer code for implementing the method steps of Claim 1.

50.   **(Original)**   A computer program product that includes a storage medium storing a computer code for implementing the method steps of Claim 20.

51.   **(Previously Presented)**   The method according to Claim 20, further including animating interaction between GUI objects.